CATS NEWSLETTER

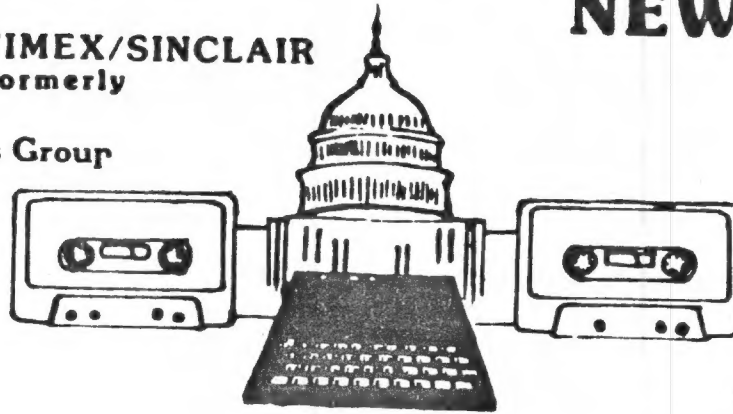**CAPITOL AREA TIMEX/SINCLAIR
USERS GROUP :Formerly**
Prince George's
Timex/Sinclair User's Group

Vol. 2 No. 4
July, 1984

CONTENTS

We now have a new group of officers in CATS! Let's wish them Luck in their new positions. We also should thank the outgoing officers at this time for the great job they did carrying CATS through the past year. We had some wonderful meetings, with great guests and lots of things to see and do. Still lots of rumors flying around the grapevine about a takever of Timex. So far nothing to all these rumors. SYNTAX has come back, bigger than ever. We hope we can all give Kirt Olsen lots of good reasons to keep publishing. All members who had a SYNC subscription who have not heard further from SYNC about their refund or reassignment of their subscripton should write to PRESIDENT OF ZIFF DAVIS PUBLISHING at ONE PARK AVENUE, New York 10016. Scream loud and clear. There is very little going on that's exciting in the TIMEX field. Most of the peripheral manufacturers are still hanging in. Remember, when you write to an advertiser tell them where you saw their ad. If you see a slight change in the look of the newsletter, it's because we have a new Editor. Yours' truly sent out a cry for contributions to this month's newsletter and was pleasantly surprised to get submissions from far and near. Phil Doughty of Providence,RI. Duncan Teague of Memphis,TN. Jim Hayes of Dover,DE. And lastly from CATS locally, Beeler,Cohen, Conger, The Fishers, Gerber, Pollock, and Shaffer. We will wait with anticipation for the August submissions that are due by July 21st please. If you really want to have fun attend the HAM and COMPUTERIST FEST at Howard County July 29. If you've never been , you are in for a great thrill. You may even come away with a new Monitor or what have you! This issue has a report from a committee meeting. Let's hope we receive a report for the members from other Committee chairmen.   JULES GESANG

CATS ROSTER OF OFFICERS

President   Mark Fisher

Vice President   Mike Cohen

2nd Vice Pres.   Wayson Lee

Secretary   Bob Curnutt

Treasurer   Sarah Fisher

Newsletter Editor Jules Gesang

AD RATES APPEAR ON PAGE 5

For this issue contributors
appear below.

Any suggestions for material you
would like to see in future
issues will be considered if you
submit your suggestions to the
EDITOR. The address for
submissions appears below with
the deadline calander.

HOW ABOUT SOME LETTERS TO THE
                    EDITOR?

NEWSLETTER contributors

Ned Beeler	Bernie Gerber
Mike Cohen	Jules Gesang
John Conger	Jim Hayes
Phil Doughty	Alan Pollock
Mark Fisher	Jack Shaffer
Sarah Fisher	Duncan Teague

1984 Meeting and Newsletter deadlines

July	14th	-------
August	11th	July 21
September	8th	Aug 18
October	13th	Sep 22
November	10th	Oct 20
December	8th	Nov 17

SUBMIT ALL NEWSLETTER MATERIAL
DIRECT TO JULES GESANG, BOX 452
RANDALLSTOWN, MD 21133 TO ARRIVE
NO LATER THAN DEADLINE.

ONE LAST MESSAGE

Well, Saturday (6-9) was my
last day as your president

I would like to thank the 55
members who were present for the
almost pseudo, but effective
ceremony.

After the break the new
administration was officially
seated, and Mike L. Cohen, V.p.
took charge and closed the meet-
ing.

I appreciated very much, your
farewell applause.

There are also some other
benifits that were afforded me
by all of you during the past
year.

For example, I had the oppor-
tunity to write an article for
SYNC MAGAZINE, a nationally
distributed periodical.

This was a special event for
me because I have never had any
education in the computer field
other than what I had learned
from the club and the members.

This little article that was
printed in the MARCH/APRIL
issue, has promped a response
that continues to this day, that
is to say, people are calling
me from as far away as Colorado,
and I still get letters from all
arround the country.

Although I wrote the article,
there were two other people who
played an important role in my
success as an author.

First I'll mention
Jules Gesang, since he put me in
touch with his friend at SYNC.
SYNC told me what they were
looking for(the subject matter
they wanted to present).

Second, and so very important
was Mark Fisher and his news-
letter articles.

It was these articles, not to
mention my incessant questioning
of Mark about specifics, that
gave me the foundation to write
the article.

The whole point of this story
is to stress just how important
to me the the CATS club and my
association with it has been.

One of the most impressive developments during my administration was the expansion of the CATS NEWSLETTER.

Thanks to Mark and his staff our newsletter has become one of finest periodicals in the country.

A special thanks has to be given to Jules.

During the begining months of my term, Jules would turn up some of the most extraordinary guests, to fill out the monthly meeting.

For example, it was Jules, who somehow finagled a way to get a TIMEX COMPUTER engineer to visit us at no cost to the club.

He was always able to inform us accurately, on ongoing activities at TIMEX and everyone else in the computer field.

It seemed like we were always the first to know the latest news,even when we didn't like it

Without a doubt Jules' contribution to the club has been immeasurable.

I am really pleased with the new officers. Having Mark as president is probably one of the best things that could have happened to the club.

I am glad to see Sara as our new Treasurer. She has put so much work into our club, it is pleasing to see her as one of our constructive officers.

Mike Cohen as V.P. is excellent, since he has beenparticipating with executive board for the past couple of months. He will already be familiar with what is wanted and and needed by the club.

My hat's off to Wayson Lee. He is the only officer to run and be elected to two successive terms. His contribution to the club has been sincere and profitable. We could use more people like him.

And Bob Curnutt as Secretary is a wise selection. He is acquainted with the problems of the club, atteneded several ececutive meetings and already knows the rest of the board.

All-in-all I am looking forward to the next year. It looks to me like we have an A-NUMBER-ONE-TEAM!!!!!!

DATABASE GROUP MEETS AT CONGER'S.

The 3rd session of the PROGRAM APPLICATIONS GROUP met on Saturday June 23rd at the home of John Conger. Nine computerists attended the meeting to discuss database programming. The meeting began with a short review of the file program in MEMOTEXT, followed by quick reviews of PROFILE and VU-FILE. Mike Cohen of Bowe (262-4642) gave a demonstration of TFO, including how to format files and reports. The conclusion, presented by John, was a short discussion of the extent to which TFO, in particular, allows you to do many of the same operations as a d-BASE II. The next session of the group will be in September; suggestions of other applications would be greatly appreciated. If there is sufficient interest, the group may expand to cover programs for the 2068. John Conger can be reached at home at 301*654-5751.

In closing, I would like to thank from the bottom of my heart all of you, who helped me to complete my term.

THANK YOU

NED

FASTLOAD Revisited

I got a "letter to the editor" last month that remarked that my review of Fastload looked like it had been written in a hurry. He was right - I was in the middle of classes, but I wanted to let people know about Fastload. The following should help to fill in the gaps I left in my last review.

Fastload is one of a group of utility programs that have been developed to eliminate one of the Timex's biggest problems - its slow LOAD and SAVE times. Two other programs (among several) that do the same job are Z-XLR8 and Q-Save. Z-XLR8 seems to have many of the features of Fastload, but I haven't seen it in operation. I have seen Q-Save in operation. It does LOAD and SAVE fast, but it requires an added filter on the line and will not LOAD or SAVE data only, as both Fastload and Z-XLR8 will.

Both Fastload and Z-XLR8 offer:

> High speed operation
> Program SAVE and LOAD
> Dimensioned string (A$(xxx)) SAVE   LOAD
> Dimensioned Numeric SAVE   LOAD
> Catalog function
> Your choice of code locations
> Your choice of SAVE speeds

The Fastload tape comes with five programs on it. There are versions of Fastload, named Monitor, to reside above RAMtop (31512 - 32767) and below the system variables (8192 - 9461). A third bare-bones version is called the "bootstrap loader". It is intended to be spliced onto the front of your programs. This allows the fast loading of your programs without requiring the separate loading of Fastload first. (Incredibly, this feature isn't used for the Monitor program. Fastload takes 1 min., 35 sec. to load - if the bootstrap were used, it would only take 23 seconds.) The remaining programs on the tape are demonstrations of Fastload's speed.

Upon LOADing "Monitor", you will be watching a user-friendly BASIC routine, that will help you LOAD Fastload-saved programs. In fact, it also isolates you from practicing with the commands. Fastload is really a machine code program. When you touch the ENTER key, the code is transferred to the area in RAM where it will operate from. As it transfers the code, it destroys the source code. It gets its commands by searching the variables area for a particular dimensioned variable -T$(24). Therefore, to use Fastload, once it's loaded, there are three steps:

> 1) Establish T$ with DIM T$(24)
> 2) Set up T$ with the command you wish to give Fastload, such as LET T$="U". Programs are SAVEd

and LOADed by starting T$ with three prefixes: inverse P(space) to SAVE, P(space) to LOAD, or U to load the next program. This action is similar to the Timex' LOAD "", but it will not crash if it starts in the middle of a program.

> 3) Invoke Fastload, using a USR call - either PRINT USR 8192 or PRINT USR 32685.

These steps can be included as program lines, allowing programs to auto-run when they are next loaded. Some of the steps involved will be discussed below.

Chaining Fastload

It is possible to chain the bootstrap loader ahead of Fastload, which is ahead of your object program. As with any time two programs are blended together, you must have a clear idea of what each program's requirements are. Fastload needs 1200 bytes, either at 31512 or 8192. In addition, there must be a T$ that has been DIMmed to 24.

Following the directions on the bootstrap loader, record a copy of the loader on your future program tape. Set it aside. Reset the machine, and load the Monitor. It is necessary to have a copy of Fastload in the proper place in memory before you attempt to SAVE a program with it. If you intend to chain Fastload onto the tape, LOAD a second copy from the source tape (using the Timex's LOAD), and press BREAK (the original copy will have destroyed itself as it moved the code). Now let T$=" P Fastload", and change line 60 to 60 PRINT USR M. Reinsert the future program tape and GOTO 1. You will now be able to write your own prompt screen. When you press ENTER with nothing but the cursor between quotes, the program and screen will be fastsaved.

If you don't feel the need for the "user-friendly" feature, you can make Fastload load your program immediately. Add lines:

> 100 RAND USR P
> 460 RAND USR Z
> 470 LET T$="+"
> 480 RAND USR P
> 550 LET T$=" P (program name)"
> 600 RAND USR P

And remove the rest. (The variabes alrady are in the program.) Now make sure that T$="P Fastload", and GOTO 60. Fastload will SAVE, and immediately look for your program. Press BREAK, and remove the tape.

Now is the time to set RAMtop, if you need a special value. Then LOAD your object program normally, DIM T$(24), LET T$=P program name", and replace the SAVE line in your program with RAND USR 32685 (or 8192). Replace the bootstrapped tape, then GOTO that line, and the program will be fast saved. When the tape is run, the bootstrap

will go in using a standard load. then fastload Fastload, which in turn will either wait for your input or automatically load your program.

A Special Case

In trying to blend TFO with Fastload I ran into a problem. TFO also uses T$, but its T$ is DIMmed to 32. Dr. Pearson anticipated this, but I couldn't add a different command string, due to the workings of TFO. Instead, I went into the code, and changed Fastload's check that T$=24 to a check that T$>=24. I then went to the Monitor program and changed the corresponding byte in the source array, then chained the program in the usual way. The result is a TFO that automatically sets RAMtop to the maximum and loads in one minute. I expect that a fully filled TFO will SAVE in six minutes, rather than 25. Call me for more info on this application.

SAVEing Arrays

The biggest savings in time occurs when you use Fastload to SAVE data only - an 8K text file from WSII SAVEs in 30 seconds. There are four new prefixes for T$ to load arrays:N - array letter, inverse N - array letter for numeric arrays, $ - array letter and inverse $- array letter for string arrays. It's possible to save from A$ and load the result back into B$. What's more, they don't even have to be the same size - if it's too long, the excess is dropped, if it's too short the rest of the array is left alone. As with the auto-starting programs, it is possible to incorporate the lines that set the values of T$ up in your program, and SAVE or LOAD data from within the program. An example of that was given in the April newsletter.

And More.....

There is one more feature to Fastload - its reports. Upon RETurn from the machine code, you will be able to see how the SAVE went or to verify the contents of the tape. You may have noticed that I specified PRINT USR 8192 rather than the usual RAND USR 8192. The Print allows you to inspect these results. By setting T$="C", PRINT USR 8192 and playing the tape will return a report on the quality of the code on the tape. If there is some interest shown in this. I'll present some ideas on how to write a program to take advantage of these reports.

Mark Fisher

AVOID COPYRIGHT INFRINGEMENTS

A users group's library is often enlarged by the copying of
programs that were written by individuals who are not group
members. It would be wise, therefore, to be familiar with
copyright laws with respect to computer programs. The following
are some general considerations and guidelines concerning the
copyright law and computer programs. These considerations are
solely for the convenience of the reader and are not intended
to, nor should they be interpreted to constitute legal advice.

Copyright law protects original works of authorship, which
includes computer programs, at least in visually perceptible
form. What is protected is not the idea, but rather the form of
expression. For example, the idea of a space war game, even if
orignal, would not be copyrightable, but the form of expression
embodied in an algorithm would be copyrightable. Copyright
protection begins when the work is first fixed in a tangible
medium of expression, e.g., reduced to writing. It is important
to remember that the work need not be published for copyright
protection to attach and that the law does not require copyright
notice until the work is actually published. Furthermore, the
new copyright law is more liberal than the old law in allowing
the copyright owner to cure omissions of notice or defects in
the notice, so that one cannot assume that a particular program
is not copyrighted merely because no copyright notice is
attached thereto.

Another important point to remember is that exact copying is not
required for copyright infringement. If substantial portions of
the work have been copied such that one would be likely to
recognize the originaly copyrighted work, copyright infringement
may have occurred. Also, copyrighted works can be embodied in
later developed works, commonly called "derivative" works.
These derivative works are the subject of a separate copyright,
but permission must be obtained from the owner of the original
copyrighted work to incorporate it in the derivative work. An
example of a derivative work would be a translation of a
computer program from one computer language to another, or the
inclusion of one program in a more detailed or complex program.
To be on the safe side, it is best to obtain permission from the
copyright owner of the original program if the basic algorithm
or any parts of the program are to be included in a new program
or the like.

If there is any quesion as to whether a program has been
copyrighted, the author of the program should be contacted and
permission to copy should be obtained in writing. If the program
appears in a Journal, the publisher as well as the author of the
publshed program should be contacted and permission obtained.
Even if no copyright notice appears adjacent to the program, the
author, if known, should be contacted to ensure that all parties
concerned have given their consent.

This information should help you recognize potentially
troublesome situations. Remember--if ou are ever in doubt,
always get permission in writing from the proper authority.

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SOFTWARE IMPRESSIONS
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
by Alan Pollock

GAME: CYCLEPATH (Deathchase) by M.J.
MACHINE: TS 2068   Escort
LOAD TIME: 2:04
JOY STICK: Definitely
SOLD BY: Games To Learn By Inc.
         Box 575, #2 South Street
         Williamsburg, Mass. 01096
         413-268-7505
PRICE: $19.95 plus shipping

So you've got a shiny new TS 2068
sittin' there when your friends come
over. "What'll she do?" they say.

Well you could load a nice spread
sheet or data file or even a word
processing program...but you want to
show off? Load Cyclepath, hand 'em a
joy stick and let 'em at it!

Arcade-fast? You bet! 3-D with a
little imagination.

On to the story. Somewhere in the
future you are charged with the
galactic responsibility of patrolling
a section of earth on a motorcycle to
keep the bad guys away. You do this
in the true cosmic tradition - shoot
'em. The foes are other motor-
cyclists, helicopters, tanks etc.

Sound easy? Catch #1: You have to
avoid the trees. Catch #2: The only
time you can fire at the enemy is
when you are traveling at top speed.
WHAM ! Those trees come at you pretty
fast.

Each time you clear your sector
daytime and nightime, you progress to
a new level of difficulty.
Translation: MORE TREES !
There are 8 levels with the promise
of a fantastic reward after clearing
the top level - probably no more
trees. You must do all of this
without hitting 3 trees. If you do,
you must start over. If anyone makes
it through level 8, please let me
know. I'm still trying to get through
level 3.

It's a fast, fun game with color
and sound, although after a while you
wish for a volume control.

It's easier to concentrate when the
game is played in black and white. I
suspect that people who are sucessful
at CYCLEPATH also drive fast around
the Beltway.

20 bucks. That's pumping 80
quarters into an arcade machine. You'd
be better off "co-op"ing the game with
someone to halve the cost.

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GAME: PENETRATORS by Melbourn House
MACHINE: TS 2068
LOAD TIME: 3:50
JOY STICK: A Must
SOLD BY: Gesang Associates, Box 452
         Randallstown, Md.21133
         301-922-0767
PRICE: Varies $11 to $15

Do you know someone you want to get
even with? Preferably someone with
arthritis in his wrist? Give them the
TS 2068 game PENETRATOR. While a
little slower than CYCLEPATH,
PENETRATOR makes you concentrate
harder because more dangers exist to
eliminate you.

In this two dimensional game, you
fly a fighter ship over, under and
through some wicked moving terrain
while trying to bomb enemy radar,
shoot down enemy missiles and avoid
being zapped or crashing into
mountains or low slung cave ceilings.

Doesn't sound so bad you say?
Here's the rub. Your wrist has to be
able to do 7 things at once: UP, DOWN,
FORWARD, BACKWARD, SHOOT, BOMB and
STOP. Gooood luck! Most joy sticks
can do 6 things. In PENETRATOR, you
bomb with the fire button but you
shoot by tapping the joy stick lightly
to the right at about 2 o'clock. Folks
that's some work out for your wrist.
Ah...but that's the challenge. I tried
to be sneaky and use a combination of
the joy stick in one hand and the key
board fire control in the other. Good
try, but drives you bonkers !

This game offers a nice selection
of menu options including the ability
to watch a pretty good demo game of
all 4 levels, and the welcome ability

to cut down on the number of sirens.
I recommend the training option for
unlimited practice to build your
confidence. For the creative minds
you can design and save your own
landscape with mountains, tunnels,
enemy radar and missles.

I like this game because you won't
master it quickly and then let it
gather dust. If you can find one at
$13 or under, it's worth it.

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GAME: QUACK ! by M. Fisher
MACHINE: TS 1000 - 2K
LOAD TIME: 28 seconds
SOLD BY: M. Fisher Associates
         c/o C.A.T.S.
PRICE: Maybe more serious involvement
       with the club and/or helping
       out the news letter?

WARNING: The Surgeon General has
determined that this game is
addictive...addictive...addictive.

What! Another shoot 'em down
game? Com' on, gimme a break. OK OK,
I know who the author is, I'll play.

You're in charge of security at
Fisher International Airport - your
job is to keep the big jets a-flying.
Those big multi-million dollar 747's
carrying thousands of humans and tons
of TS software. Hey, heavy-duty
pressure.

The problem is DUCKS - Flocks of
'em - flying in the opposite
direction of the jets. If one of
those ducks flies into a jet
engine...YUK ! Mess-time. The big
silver bird's commin' down. Law-
suit city.

With all due respect to the
Audubon Society, 'only one thing to
do. Shoot those ducks outta the sky!
BUT, if you miss, guess what you'll
probably hit. You got it - Boeing's
finest.

Hey, piece-a-cake. Here come the
birds. OK now just figure the ducks
speed and your angle of trajectory
and FIRE! What? I missed? What's
goin' on here?

The maniacal Mr. Fisher makes his
move. When you fire, the speed of the

ducks changes and if you only wing 'em
(sorry about that), a small part of
the original duck keeps flying and the
target becomes much harder to hit.
Strange bird indeed, but a heck of a
fun game.

Simple instructions: Self starting
and hit almost any button to fire.
2K - How does he do it ?

This is family software. At my house
QUACK ! brings smiles and sqeals of
delight from all, including the 2 year
old. This game eases the apprehension
of non-computerists.

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PROGRAM: TS DEMO EPROM
MACHINE: TS 1000 - 2K
LOAD TIME: Zero !
SOLD BY: Gesang Associates, Box 452
         Randallstown, Md. 21133
         301-922-0767
PRICE: $15

"Hey Lucille! Look at this. Can you
believe it - a review of a 2K demo
eprom. Boy that news letter must be
really hard up for articles."

Humph. As a professional, I can
only respond - " Oh Yeaaa ?"

As a novice to computers, I was
curious. This demo board seemed like a
good opportunity to learn something
about eproms and diddle a little with
the connecting plug. So I splurged 15
bucks, Jules handed over this funny
lookin' thing with wires and resistors
and a chip and guess what - The
program's neat.

Love that load time. Hit RUN and
you're off. Now please overlook the
obvious hype of a certain watch
company. The demo's straight foward
and interactive.

Does your house have someone that
thinks you spend too much time with
computers, someone that's
uncomfortable around those little
black boxes?...maybe some folks that
still marvel at the six transistor
radio?...mine does.   I set it up in
the kitchen one night and walked
away. I got a kick out of watching the
whole family get involved. The program
asks easy, friendly questions and you

should see lots of smiles, hear some "that's neat", and best of all "Gee, I didn't know it was that easy."

The program starts with a nice moving graphics display, asks your name and shows it in big block letters (up to 7), which you can BREAK and COPY. My children had the best time with this and the basic math.

Next we have a little show-off trigonometry, bar graph, clever graphics of the Space Shuttle and finally the demo ends with the most humorous bit - recipes. Did he say recipes ?

A chicken dinner recipe for 4 is shown and you have the option to enter how many people you need to serve and the recipe adjusts accordingly. Where's the humor ? My wife entered 926 people and everyone roared when the recipe converted.

The demo personally thanks you and re-starts, waiting for the next technophobic to walk by.

Too mundane you sneer? Not sophisticated enough for you?...Well, excuse me - you're definitely IBM material.

As beginners, my family and I have already had our moneys worth of fun together, and that's the key. But do me a favor, don't tell Jules how enjoyable this is. He's got a gold mine here.

I'll miss this demo when it's dismantled.
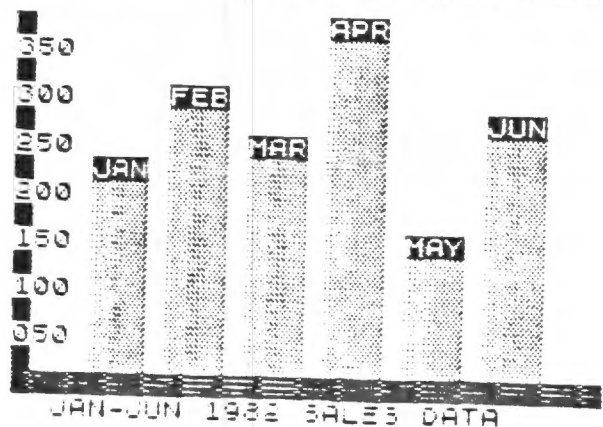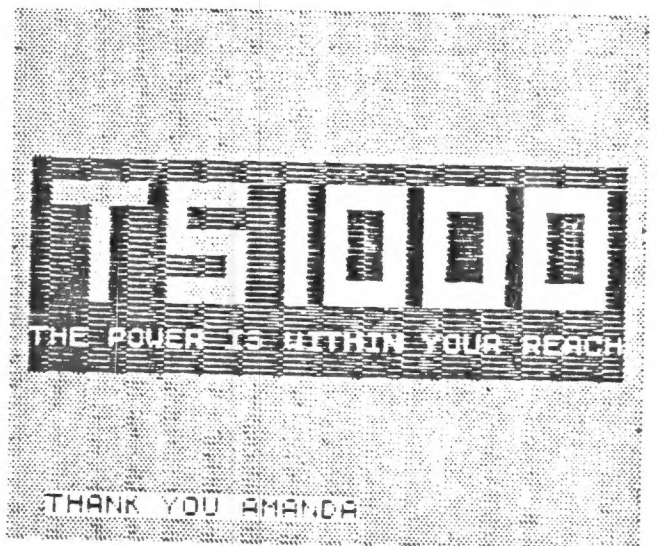

TS 2068 QUICK-FIX

I'm looking for an answer to make my TS 2068 space bar work when pressed on either end. Until then I've put masking tape on the areas that don't work. When my finger hits the rough tape texture it automatically slides over to the working part of the bar.

TRY ME --- PRESS ANY NUMBER KEY

A WARM WELCOME TO....

AMANDA

THANK YOU AMANDA
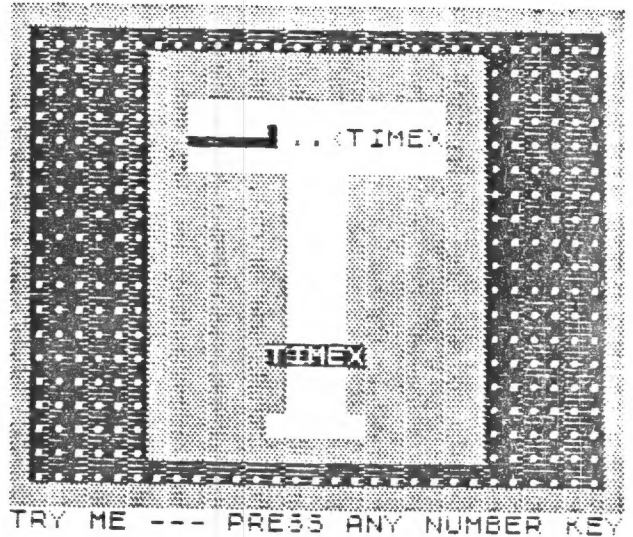
JAN-JUN 1983 SALES DATA

EPHEMERIS V

Contributed by:
DUNCAN R. TEAGUE
Planetarium Director
CRAIGMONT PLANETARIUM
Memphis, Tennessee

Ephemeris V is a planet finder program for the Timex Sinclair 16K Computer. It loaded in one try and ran automatically. After briefly displaying the title, author, and copyright statements, it asks for information about the user's location in time and space. Inputs are required for the user's latitude and longitude (in decimal degrees), the date (as an eight-digit number), and local time (using a 24-hour clock). There was a thoughtful reminder to subtract an hour for daylight savings time.

Since Ephemeris V is advertised as a planet finder, the program next asks what planet the user wants to find. The only one I could see the evening in question was Jupiter. I pressed the appropriate key for Jupiter, and, a few seconds later, the television screen was filled with information in a neat display. Information included my latitude and longitude, local sidereal time, the current phase of the moon, the constellation in which Jupiter was located, and Jupiter's coordinates in three different systems: right ascension and declination; altitude and azimuth; and plain English.

The next screen is a menu of eight choices, the most impressive of which is a graphic display of the sky -- a 50° section of the ecliptic including the planet just found and the nearby constellations. The position of the planet is indicated by a flashing ∅.

The same information can be obtained for another planet, the sun, or the moon. If the object is not in the sky at the time specified during the set-up phase, the user is told this information along with the time of the next meridian transit of that object.

Other options allow the alteration of the latitude, longitude, date, and time of observation. The last option is to find a "given point," essentially a process by which right ascension and declination of the "given point" are converted to altitude and azimuth.

The only problems I found with Ephemeris V are in this option. When the right ascension and declination of the given point are input, the display shows the right ascension one minute less than the value input by the user. If the observer's local sidereal time and 0° declination are the inputs, the azimuth displayed should be 180°, and the altitude displayed should be same as the altitude of the observer's celestial equator. Instead the program "crashes" and reports an error code that means an arithmetic overflow.

Despite these two minor problems, Ephemeris V is an impressive program. It can tell the user the required information for any year between 1920 and 2020. For the next SEPA Conference in Bradenton, Florida, Ephemeris V indicates that Mars and Saturn will be inconjunction in Libra, and that the third quarter moon will rise just in time for a midnight swim on the 21st (of June 1984). It would make a great interactive lobby display for a science museum. Visitors could easily follow the prompts once the set-up phase is completed. I know I'll use Ephemeris V to provide answers to those off-the-wall questions I get by telephone about when the moon will be full next May and where to look in the morning sky for Venus and Mars.

Ephemeris V is available from Robotec, Inc., 59 C Street, Ampoint Industrial Park, Perrysburg, Ohio (43551). The cost is $14.95 + $1.25 S&H for mail order for the cassette and the acompanying documentation.

MAKING BACKUP CASSETTE COPIES FOR 2068 AUTORUN MC PROGRAMS.

With a little analysis it turns out to be very easy to make backup copies of most commercial 2068 autorun MC programs from your computer. These programs are usually not responsive to BREAK and LIST. One always successful way of course is to make a cassette to cassette copy using two player recorders. Signal condition- ing (attenuation/filtering) between the ear jack of the sending player and the mic jack of the receiving recorder is required. The author owns a Winky Board I which accomplishes this very well for TS 1000/1500 tapes and it is presumed
* that the Winky Board for the 2068 (not yet acquired by the author) will work similarly. However, in those cases where the MC program contains a BASIC "LOADER" there is no problem making a backup tape from your computer with a little analysis. The MERGE command will load the tape the same as LOAD but among other things it will not execute a programmed autorun. Start out with MERGE " " therefore and stop the tape as soon as the OK report appears. Do not rewind! Then LIST and analyze what you see. Using PSION VU-3D as an example for those that have it, you first see a one liner which says LOAD "VU-3D" - clearly identifying a subsequent basic program on the tape. Therefore, in this example, one would MERGE " " again, stop again, and LIST. In the VU-3D example one now sees a 14 line program which requires some analysis. What indeed are we look- ing for? We are looking first for those lines which LOAD " " SCREEN$ and which LOAD " " CODE. In the VU-3D example, we will see this in line 9 of the 14 line program. Another thing we're looking for is a reset of RAMTOP. In the VU-3D example, we find this also in line 9. Unfortunately I really can't give you a universal recipe since an analysis of each individual program is required. In the VU-3D example, it is clear that a LOAD followed by a start from line 9 will (a) reset RAMTOP, (b) load the display screen, and (c) load the machine code. Another line (line 12) divulges the number of bytes in the MC

section since SAVE""CODE m, n requires full parsing (i.e., specification of m, the start address, and n, the number of bytes included). However, if one isn't sure of n, it is always a sure thing to include all of the bytes between the RAMTOP plus 1 and P-RAMT (65535) This is the case in the VU-3D example. I will now describe a "cookbook" recipe to copy the example program; namely, PSION VU-3D. Two cassettes are involved - the original, C-O, and the copy, C-C. The following instructions involve direct commands.

VU-3D

STEP	REMARK
1. Insert C-O, MERGE "" Start recorder.	Stop recorder on OK report. Do not rewind
2. NEW	Obliterates 1 line LOAD program (unnecessary)
3. MERGE "" Start recorder.	Stop recorder on OK report. Do not rewind.
4. LIST- Add line 9999 as follows: 9999 SAVE "VU-3D" LINE 9	
5. Remove C-O Insert C-C.	Do not rewind C-O. Put a blank leader in C-C.
6. GOTO 9999	Direct command. The 2068 will instruct you re' recorder.
7. Stop the record- er immediately after the OK report.	Don't waste tape. It will only cause delay in reload.
8. Remove C-C. Insert C-O. LOAD "S" SCREEN$ Stop recorder as soon as OK report shows up.	Do not rewind C-C. PSION named this file "S". You will have to operate PLAY on recorder without prompt.

* It has since been determined that Winky I will work on the 2068 tapes for duping machine

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9. Remove C-O.   You will get re-
   Insert C-C. SAVE   corder prompt.
   "S" SCREEN$ Stop
   recorder as soon
   as OK report shows up.

10. Remove C-C. Insert
    C-O. LOAD " " CODE
    Stop recorder as
    soon as OK report
    shows up.

11. Remove C-O. Insert
    C-C.   SAVE "VU-3D"
    code 30720, 34815

Test your new copy by rewinding the tape,
resetting the computer and LOAD "VU-3D".
You won't be able to tell the difference
from the original. It's all there. Of
course the procedure will vary somewhat
for other programs dependent on analysis
of the BASIC "LOADER".

Bernie Gerber

sinclair
QUANTUM LEAP

5.20 84 --- THIS EVENING AT THE
MEETING OF THE BOSTON COMPUTER
SOCIETY, REPRESENTATIVES OF
SINCLAIR RESEARCH OF CAMBRIDGE,
ENGLAND UNVEILED FOR THE FIRST
TIME IN AMERICA THEIR REVOLU-
TIONARY SINCLAIR QL COMPUTER.

IN EARLY DEVELOPMENT, THE NEW
SINCLAIR FOR 1984 WAS TO BE A
RESTYLED SPECTRUM WITH DUAL
MICRO DRIVES AND A FLAT SCREEN
DISPLAY, BUT THE DECISION WAS
MADE TO BUILD AN ENTIRELY NEW
MACHINE AROUND THE MOTOROLA
68008 MICROPROCESSOR... AND
WHAT A MACHINE IT IS.

AN AUDIENCE OF SEVERAL HUNDRED
VIEWED A SPECTACULAR LIVE DEMO
THAT WAS PROJECTED ONTO A LARGE
SCREEN. AFTER THE MULTI-MEDIA
DEMO, QUESTIONS WERE TAKEN FROM
THE ENTHUSIASTIC GATHERING AND
TWO COMPUTERS WERE MADE AVAIL-
ABLE TO ANYONE WHO WISHED TO TRY
A LITTLE "HANDS-ON"... AND LOTS
OF US DID. BY NOW YOU HAVE READ
ARTICLES DESCRIBING THE FEATURES
OF THE QL, SO WHAT FOLLOWS IS
INFORMATION FROM HASTILY WRIT-
TEN NOTES THAT MAY ADD SOME NEW
DATA TO WHAT YOU ALREADY KNOW.

RESOURCES

At the moment I have very little to report in the
Resources area. For those looking for copies of the
book THE ESSENTIAL GUIDE TO TIMEX/SINCLAIR HOME
COMPUTERS, by Morse, Adamson, Anrep and Hancock should
try Maryland Book Exchange in College Park.

I am working on some continuance of Home Energy
Programs and will report more on them next month. I
would like more input from members of the group who
have ideas and information to share. You can call me at
301*278-5991 after 11 A.M.
Mike Cohen

* 128K: 32K FOR DISPLAY, 6K FOR
  OPERATING SYSTEM, OVER 90K FREE
* TWO RS-232C SERIAL PORTS WITH
  PARALLEL OPTION
* 400 PAGE MANUAL (A TECHNICAL
  "QL BIBLE",WRITTEN BY OP-SYS
  AUTHOR IS CURRENTLY BEING PREP
  ARED FOR RELEASE BY YEAR END)
* SOFTWARE INCLUDED: "QUILL"WP,
  "EASEL"GRAPHICS, "ARCHIVE"
  DATABASE MNGMT, AND "ABACUS"
  SPREADSHEET ALL BY PSION
* NEW SOFTWARE NOW UNDER DEVELOP-
  MENT BY A MAJOR AMERICAN CORP.
* MAIL ORDER AVAILABILTY PENDING
  FCC APPROVAL IN USA. AVAILABLE
  NOW IN UK, WITH 10 WEEK DELIV-
  ERY. (UK VERSION WILL WORK IN
  USA WITH MONITOR, BUT NOT TV).
* SINCLAIR EXPLORING OTHER MEANS
  OF MARKETING, BUT WILL AVOID
  ANY SITUATION THAT PLACES DIS-
  TRIBUTION OUT OF THEIR CONTROL.
* "QLUB", THE QL USERS BUREAU, A
  SINCLAIR SPONSORED USER GROUP
  WITH BI-MONTHLY NEWSLETTER,
  FREE SOFTWARE UPDATES, FOR A
  $30. ANNUAL FEE
* IN-THE-WORKS: A 68000 ASSEMBLER
  PASCAL, FORTRAN, "C" COMPILER,
  TERMINAL EMULATOR TO TIE INTO
  A MINI, MAINFRAME, OR VIDEOTEX,
  ANALOG-TO-DIGITAL CONVERTER,
  HARD DISK INTERFACE, MODEM,
  IEEE-488 INTERFACE, AND MUCH,
  MUCH MORE.
* PRICE: $499.

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THE REVOLUTION CONTINUES...
I HAVE SEEN THE FUTURE OF PER-
SONAL AND SMALL BUSINESS COMPUT-
ING, AND IT IS SINCLAIR QL.

PHIL DOUGHTY, OF VIDIOM,
PO BOX 3113, PROVIDENCE,RI 02906

TIMEX CORPORATION Waterbury Ct. 06720

Dear Timex Sinclair 2068 Users:

Thank you for your recent request for technical information on the T/S 2068 computer. Available information is as follows.

A large size schematic diagram of the TS2068 may be purchased for $2.50 (postage included) from the Timex facility in Little Rock, Arkansas (Address listed below). The schematic is available now.

A Comprehensive Technical Manuel will also be available from Little Rock, approximately May 21, 1984. The manuel is about 300 pages long and includes a reduced-sized schematic diagram. It will be priced at $25.00 (postage included). This comprehensive Technical Manuel contains all of the information that was to appear in the "Advanced Programming Concepts Manuel" referred to in the T/s 2068 Users Manuel. It includes updated and corrected versions of all of the material which previously had been made available as the "Timex Sinclair 2000 Third Party Software Guide". It also contains additional information, some of which has been published as Technical Bulletins, and some of which is new. This Manuel includes ALL technical information which is available from Timex for the T/S 2068. The Manuel will include a printed circuit board layout for using EPROMS in the cartridge port.

Subjects covered include memory, bank switching, block diagram, I/O facilities, I/O port layout map, interface with external devices, connector specifications, system software, commands available on the 2068 but not on the ZX Spectrum, advanced video modes, connection of RGB Monitor, and other information.

The address for both the schematic and Technical Manuel is as follows:

Technical Materials Sales Division
P.O. Box 1378
Nittle Rock, Arkansas 72203

The information described above is the ONLY technical information that is available for the T/S 2068 computer. No information is available for products which have not yet been shipped, including the Modem, System Interface Unit, 80-Column Printer, or Microdrives. Accessories and peripherals marketed for the ZX Spectrum will not, in general, directly interconnect with the T/S 2068. We have no information on modifications required for such an interconnection.

Thank you for your continued interest in the T/S 2068.

Regards,

Doug Smith, Manager
Product Planning
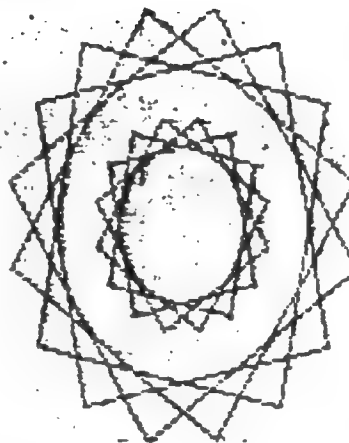
```
   1>REM STARSPIN/SPECTRUM © DGO
verton 1983 Modified for TS2068
BGerber 1984 STARSPIN 1 ZX/COMPU
TING FEB/MAR 1984
   2 BORDER 0: PAPER 7: BRIGHT 1
: CLS
   3 OVER 0: CLEAR 63999
   4 POKE 23658,8
   5 LET Z=32768: LET D=0
   7 FOR m=1 TO 3
   10 FOR N=0+D TO 2*PI+D STEP PI
/8
   15 INK 0: PLOT 127+127*SIN N,6
7+87*COS (N)
   16 INK 0: PLOT 127+127*SIN (N+
PI/100),87+87*COS (N+PI/100)
   17 INK 0: PLOT 127+127*SIN (N+
PI/50),87+87*COS (N+PI/50)
   18 INK 0: PLOT 127+127*SIN (N+
3*PI/100),87+87*COS (N+3*PI/100)
   22 INK 0: PLOT 127+70*SIN -N,8
7+70*COS -N
   25 DRAW 70*(SIN (-N+PI/2)-SIN
-N),70*(COS (-N+PI/2)-COS -N)
   26 INK 0: PLOT 127+35*SIN N, 7
+35*COS N
   27 DRAW 35*(SIN (N+PI/2)-SIN N
),35*(COS (N+PI/2)-COS N)
   30 NEXT N
   35 GO SUB 100
   40 LET Z=Z+7000
   50 LET D=D+PI/32
   60 CLS
   70 NEXT M
   92 GO TO 200
   100 RESTORE 110: FOR N=64000 TO
64020: READ Q: POKE N,Q: NEXT N
: RANDOMIZE USR 64000
   110 DATA 17,0,64,33,Z-INT (Z/25
6)*256,INT (Z/256),6,27,197,6,0,
26,119,19,35,16,249,193,16,244 2
01
   120 RETURN
   200 LET Z=32768
   205 FOR F=0 TO 60 STEP 20
   210 RESTORE 220: FOR N=64000+F
TO 64019+F: READ Q: POKE N,Q: NE
XT N
   220 DATA 17,Z-INT (Z/256)*256 I
NT (Z/256),33,0,64,6,27,197,6,0,
26,119,19,35,16,249,193,16,244
   230 LET Z=Z+7000
   240 NEXT F
   250 POKE 64060,201
   300 IF INKEY$="" THEN RANDOMIZE
USR 64000
   303 IF INKEY$="3" THEN FOR X=1
TO 20: NEXT X: RANDOMIZE USR 640
00: GO TO 303
   309 GO TO 300
```

Where is the TIMEX MODEM?

It's alive and well and is now being sold by E-Z KEY and other distributors. This product allows the Timex computer to enter the new era of TELECOMMUNICATIONS. It is simple to install and use. Just unplug your phone jack from the phone outlet, plug this cable into the modem, and connect the modem phone jack back into the phone outlet. Then connect your computer to the modem, load the supplied software (MTERM/T) and you are ready to use services of other computer and data banks. There is no need to have any knowledge of computing or programming to make use of this product. With the MTERM/T software loaded, your computer and modem will function as a smart terminal. With this modem (and appropriate subscriptions or memberships) you will be able to use your telephone line to:

+ Connect to outside telecommunications services like THE SOURCE, CompuServe, Dow Jones News/Retrieval, and MCI Digital Information Services Corp.
+ Use your telephone in the normal fashion, without changing any connections.
+ Bank and shop at home.
+ Send electronic mail.
+ Access the latest news, weather, sports and financial information.
+ Read electronic editions of important newspapers, magazines and advisory services.
+ Gather research from a wide range of library data bases.
+ Communicate with other computers.
+ Tap into special interest bulletin boards.
+ Print displayed screens (with optional Timex printer).

In addition to such capabilities, your 2050 Modem can do many more useful functions under the control of optional software package. The 2050 Modem comes with cassette software for Timex 1000/1500 and 2068 computers and has Auto Dial/Auto Answer features.

Priced at $119.95 + $5.20 S/H.

All Timex/Sinclair products sold here safe to get info.
To order, send check or M.O. to:

E-Z KEY
Suite 75C
711 Southern Artery
Quincy, MA 02169
(617) 773-1187
Visa and Master card also accepted.

Designed especially for all Timex computers, the 2050 offers some exceptional features at a remarkable price. It's one of the new 'modular' hook-up modems. This means you don't need to put acoustic 'cups' on your telephone. Just plug the modem into your phone jack. The standard SMART I software that comes on cassette will allow you to use the 2050 with TIMEX 1000,1500 and 2068 computers and provides the capability to auto answer incoming computer calls, as well as access any outside data base. The optional SMART II software comes on cassette and provides auto dial of up to 14 different phone numbers, each with it's own preset access codes and log-on sequences! You can save and load other files containing phone numbers and other communication parameters... making the auto dial feature capable of many more than the basic 14 numbers. Incoming data is handled just as nicely. You can store it right in your RAM and print it out later. For example, a friend might send you a letter over he phone. He types it all up, then dials your number. Your TIMEX answers the phone (even if you're not there) and receives the message in an instant. When you get home, you check the computer for messages, see one present, and have it printed out! ORDER YOUR'S TODAY! 2050 MODEM 4 lb. $119.95 SMART II/2068 1 lb. $29.95 E-Z KEY

Add $10.00 S/H

SUITE 75C, 711 SOUTHERN ARTERY QUINCY, MASSACHUSETTS 02169

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JIM HAYES, DOVER DE.

STREAMING ALONG

I'm sure that you all know by now how to drive your printers from a program; you simply replace your customary PRINT statement with a LPRINT statement.

Simple, right?

But what if you have a program which will print to the printer or to the screen at the user's option? How do you program this ability into the computer? You might try something like this:

```
10 INPUT"Print to S-creen, or P-rinter";a$
20 IF a$="P" THEN LPRINT "Message"
30 IF a$="S" THEN PRINT "Message"
```

This method works well, but takes two sets of print statements at every output point. Thus taking up valuable memory and slowing your computerized masterpiece down.

Fortunately, Uncle Clive provided an alternate way of sending output to the screen and/or printer. This alternate way has to do with the way that your TS 2068/ZX Spectrum looks at outputed data.

Upon power-up, the computer sets up channels for your output to travel along. These channels are to the printer, screen, edit lines, and other areas beyond the scope of this article. It then assigns these channels to certain output statements: screen for PRINT and LIST; printer for LPRINT and LLIST; and edit lines for ROM output. This channeling of data is known as STREAMING. Each of the three primary output areas mentioned are given a number all their own. Stream 1 goes to the edit lines, stream 2 goes to the screen, and stream 3 goes to the printer. Thus; by changing the default area of each stream, we can redirect outputed data. This redirecting is accomplished by assigning the stream to a new area: "K" for the edit lines, "S" for the screen, and "P" for the printer. Thus, by changing the output area of stream 2, we can cause PRINT and LIST statements to go somewhere other than on the screen. This is done by using the OPEN# statement in the form of OPEN#<Stream>,"<Device>". Consider the new version of our program:

```
10 INPUT"Print to the S-creen, or P-rinter";a$:OPEN#2,a$
20 PRINT"Message"
```

This new version does the same as the first but shorter. In a longer program this can add up to a savings of several kilobytes. Of course, once you have re-routed the data, you can return it to its normal area by using the CLOSE# command in the format of CLOSE#<Stream>.

Another unique trick of streaming is the ability to print on the edit lines by opening stream 2 to the "K" device. See if you can figure this out from the previous examples we've used.

Happy streaming!

```
1 REM BINARY CHARACTER
   BUILDER
   BY:J.SHAFFER (12/29/83)
2 FAST
3 GOSUB 400
4 DIM D(8)
19 DIM D(8)
20 LET D(1)=128
21 LET D(2)=64
22 LET D(3)=32
23 LET D(4)=16
24 LET D(5)=8
25 LET D(6)=4
26 LET D(7)=2
27 LET D(8)=1
28 LET I=0
29 LET A=0
30 LET G$=""
40 INPUT B$
50 IF LEN B$<>8 THEN GOTO 30
60 PRINT TAB 2;B$;
70 FOR R=1 TO 8
80 IF B$(R)="1" THEN LET A=A+D
(R)
95 IF B$(R)="1" THEN LET G$=G$
+CHR$ 128
100 IF B$(R)="0" THEN LET A=A+0
105 IF B$(R)="0" THEN LET G$=G$
+CHR$ 49
110 NEXT R
120 PRINT " = ";A
125 PRINT AT I+6,20;G$
130 LET I=I+1
140 IF I=7 THEN GOTO 29
150 PRINT AT 20,0;"    TO RE-DE
FINE OR MAKE NEW    CHARACTE
R---(ANY KEY)"
154 SLOW
155 IF INKEY$="" THEN GOTO 155
160 IF INKEY$="" THEN LIST
170 CLS
180 GOTO 1
400 PRINT AT 4,2;" BINARY   DE
C.  CHARACTER "
401 PRINT
415 FOR N=6 TO 13
420 PRINT AT N,20;"LLLLLLLL"
425 NEXT N
430 PRINT AT 1,6;"*CHARACTER BU
ILDER*",AT 2,7;"ZX81-TS1000/1500
",AT 3,2;"INPUT 8 DIGIT BINARY N
UMBER."
460 PRINT AT 5,0;"
"
470 RETURN
9900 SAVE "BDC"
9901 GOTO 1
```

Capitol Area Timex/Sinclair Users' Group
P.O.Box 725
Bladensburg, MD 20710

July, 1984

Name _____

Address _____

_____ ZIP _____

Phone   Home _____ Office _____

memberships - $12.00 (family/individual);make checks payable to C.A.T.S.

If family membership, please list family members participating:

_____

Occupation _____

Ham Radio call sign _____

<div align="center">Equipment</div>

ZX 80 _____   RAM size _____

MA 80 _____   full keyboard _____

ZX 81 _____   Printer _____

TS 1000 _____   type _____

TS 2000 _____   other interface _____

Special interest use for computer: ie, games, ham radio interface,

business, other, etc. _____

_____

Languages: Basic _____   Other _____

            Machine _____   _____

No. of years computer experience _____

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_____

- -

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The mailing address of the Capitol Area Timex/Sinclair User's
Group is:

Capitol Area Timex/Sinclair User's group
P.O. Box 725
Bladensburg, MD 20710

CATS is a non-profit special interest organization dedicated to
serving the interests of those who own, use, or are interested
in learning more about the Timex/Sinclair family of personal
computers.

The official contact person for CATS is JULES GESANG:
301*922-0767

Meetings are held on the second Saturday of each month at 2
P.M. in the large meeting room of the New Carrollton Branch
Public Library.

Ham Radio Network Information
OZX Net...Wednesdays, 9p.m. local time; 14.345 MHz NV4F NCS
Eastern Regional Sinclair Net...Sundays, 1600 Z; 7.245 MHz
K02F NCS

||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

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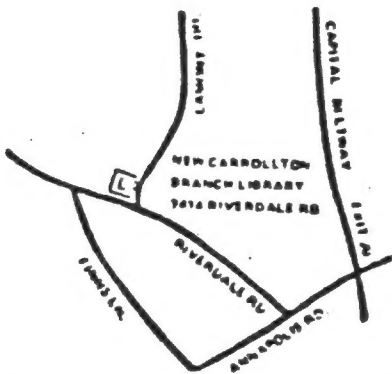
Next CATS Meeting ++ 2 P.M.

SATURDAY, July 14

New Carrolton Public Library
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IF YOU ARE NOT A MEMBER OF CATS, THIS IS THE ONLY ISSUE YOU WILL RECIEVE
Dues = $12 per year, per family.

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